KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT BUREAU OF WATER (4/14/97) (Revised 12/03/97, Revised August, 2002, February 2007, January 2017, February 2020)

"INSTRUCTIONS FOR COMPLETING THE "WATER QUALITY PROTECTION PLAN"

KDHE is charged with protecting the waters of the state (K.A.R. 28-16-28). KDHE is also working to protect state water quality while minimizing interference in the construction/land alteration activities involving water resources and flood plains. KDHE encourages you to go through the thought process of how the project activity can create water quality impacts and the available measures to avoid or minimize water quality standard violations. The attached form will help you document your water quality protection measures (attach extra sheets if necessary). **This exercise could save you time and money by avoiding delays associated with investigations, litigation and lengthy processing procedures or investigating low cost alternatives.** Additionally, it may help reduce the potential for a registered public complaint, civil lawsuit, and save tax payers dollars, while protecting state water's beneficial uses for the citizens of Kansas and border states. Attachment 1 to these instructions, "CONSTRUCTION SITE POLLUTION CONTROL REFERENCE TOOL" and fact sheet, are good starting points for developing a water quality protection plan.

I. **Project information**: Fill in according to the NWP or 404 Application. Name, description, legal location, water body receiving discharge, owner/ onsite contact.

II.&III. Activity: Refers to these possible project activities and associated water quality impacts.

Land clearing/dirt moving, fill, dredge, shaping- sediment, turbidity suspended solids, discharge of floating materials. Vegetation control/eradication using chemicals.
Heavy equipment use- Spills of fuel, solvents, hazardous chemicals.

Vegetation Restoration- Potential Fertilizer application, storage, transport may result in nutrient enrichment (scum, excess mat algae, excess suspended algae (pea green) rooted vegetation).

Streambank Stabilization- Rip-rap using an unacceptable material such as asphalt, contaminated concrete rubble, creosote treated wood.

Construction waste- disposal according to state and local regulations and ordinances.

Removal of natural oxygen sources: riffles, rocks elevations in stream channel basin.

IV. Water Quality Protection Measures: Identify measures or practices to minimize water quality impacts.

Erosion/sediment control- Sediment ponds, filter strips, erosion control mats, silt fences, surface roughening, mulch etc.

Fertilizer- Apply fertilizer (phosphorus, nitrogen) according to label instructions in a manner that will not contribute to nutrients already in the waters.

Bank stabilization- Avoid using materials that may lose contaminants to ground and or surface water.

Spill Response- stop/slow leak if possible (clamp hose, plug hole etc.) Dial 911 and KDHE 785-291-3333 24 hours a day) have absorbents or spill kits on site, build a berm or temporary containment. *Spill Prevention plan*- assure all equipment is leak free before putting on site, keep mechanical fluids, containers and equipment an adequate distance from the waters edge. Implement vandalism minimization.

KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT BUREAU OF WATER

WATER QUALITY PROTECTION PLAN

I. PROJECT INFORMATION

Project Name: _____

Project Description:_____

Project Legal Description and receiving water:_____

Project Owner:_____Project Site: Contact:_____
****

II. Activity to Complete Project

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

_____

6. _____

_____

III. Potential Water Quality Impacts (Use appropriate number from above).

Sediment/ Erosion/ Suspended Solids _____
Mechanical fluids/heavy metals _____
Nutrients (nitrogen, phosphorus) _____
Vegetation control/eradication chemicals _____
Low oxygen _____

WATER QUALITY PROTECTION PLAN

IV. Water Quality Protection Measures for the above activities

1._____

_____

2._____

_____

3._____

_____

4_____

_____

5. _____

_____

6_____

_____

I have completed/ reviewed the Water Quality Protection Plan and agree to ensure its implementation:

PROJECT OWNER:_____ DATE:_____

REPRESENTING:_____ DATE:_____

SITE PROJECT MANAGER: _____ DATE: _____

KDHE requests you to keep this plan on site during construction.

If the water body is considered by KDHE to be an OUTSTANDING NATIONAL RESOURCE WATER (ONRW), EXECPTIONAL STATE WATER (ESW) OR SPECIAL AQUATIC LIFE USE WATER (SALU), you should keep a copy of this plan on site during construction and submit a copy to:

Kansas Department of Health and Environment
Bureau of Environmental Field Services
Watershed Management Section
1000 SW Jackson St., Suite 430
Topeka, KS 66612-1367
(785) 296-4195
(785) 559-4258

CONSTRUCTION SITE POLLUTION CONTROL REFERENCE TOOL (See attached fact sheet for more water quality protection practices).

Water Quality Standard Criteria (From K.A.R. 28-16-28 (e) et al.)	**Substances/actions Likely to Result in Violations of the Water Quality Standards**	**Water Quality Protection Practices**
pH below 6.5 PH above 8.5	Acids, caustics,	Prevent or respond to equipment leaks or spills. Report spill. Keep spill equipment (absorbents, socks etc.) on site. Push up berm etc. Locate and store substances an adequate distance from water resource. Implement vandalism prevention/ reduction practices.
Visible oil and grease	Fuel, mechanical maintenance fluids, solvents, oil based paints.	Prevent or respond to equipment leaks or spills. Report spill. Keep spill equipment (absorbents, socks etc.) on site. Push up berm etc. Locate and store substances an adequate distance from water resource. Implement vandalism prevention/ reduction practices.
Floating debris, solid materials	Artificial items, such as food containers, plastic paper or anything else which may trigger a complaint.	Good housekeeping, a portable waste container. Proper disposal of construction waste, rubbish, equipment parts, tires etc.
Dissolved oxygen below 5.0 Biochemcial Oxygen Demand 3.0 mg/l (BOD)	Oxygen depletion from removal of natural aeration sources or overloading organic matter.	Minimize stream geometry changes, removal of riffle and rocky areas. Design stream channel geometry for artificial sources of oxygenation.
Pesticides	Substances which are used to control or eradicate living organisms (plants animals fungus).	Follow Kansas Regulations, follow label instructions, investigate mechanical / biological alternatives.
Suspended solids (sources)	Accelerated sedimentation, siltation and erosion form land disturbance, stream and bank alteration. **If using heavy equipment see practices for hazardous, visible oil etc. and pH criteria.**	**Sediment/siltation**: silt barriers/fences, sediment ponds, retention and detention dams, protect or restore wetlands/riparian areas, establish buffer strip, stabilize streambank. **Erosion:** compaction, surface roughening, erosion control mats, mulch systems, vegetative plantings. Use mulch or hydro- seeding.
Nutrients	Natural or commercial sources of nitrogen, phosphorus.	Follow label instructions, apply according to vegetation needs rate. Use mulching techniques.
Toxics / hazardous	Any contaminant which affects the health of a living, non-microbial organism. May include infectious pathogens, radioactive isotopes etc..	Prevent or respond to equipment leaks or spills. Report spill. Keep spill equipment (absorbents, socks etc.) on site. Push up berm etc. Locate and store substances an adequate distance from water resource. Implement vandalism prevention /reduction practices
Chlorides		
Sulfates		

Notes for Water Watchers

Kansas Department of Health and Environment

November, 1994 (Revised October, 1997, Revised August, 2002, February 2007)

CONSTRUCTION SITE POLLUTION CONTROL

Loss of soil due to erosion is estimated to be 25.4 billion tons a year world wide. Improperly implemented activities which disturb land such as agricultural production, construction activities, or land clearing creates potential for sediment to be transported off the site, often affecting nearby water resources. When this off-site transport is accelerated or excessive, a serious pollution problem results. Degradation to the ecosystem results in increased public tax dollars which must be used for **a) street cleaning and b) stormwater sewer maintenance, c) water treatment costs, d) flood repair and control, e) dredging or sediment removal from reservoirs.** Excessive stream sediment also effects stream direction and flow, and may increase stream bank instability.

Adverse impacts include:

1) Reductions in:
a) oxygen,
b) sunlight
c) growth
d) ability to secure food
e) satisfactory habitat
f) suitable spawning beds

2) Increases in:
a) temperature,
b) need for mechanical, biological and chemical pest control
c) chances for displacement of desirable or native species with undesirable or non-native species.

Additional pollution associated with construction sites concerns include chemical applications (nutrients and hazardous substances), hazardous and solid wastes, and fuel storage.

All construction activities need to be conducted in a manner that avoids or minimizes discharge to Kansas water resources. The following measures can be used to develop a construction site pollution control plan.

I. EROSION AND SEDIMENT CONTROL MEASURES

PLANNING PHASE

* Disturb only what is needed for each phase of the project
* Designate and use an equipment staging area
* Write a pollution control plan for the project

TREATMENT AND APPLICATION

Rip-rap	Geo-textiles	Maintain and protect natural and buffer areas
Cover soil stock piles	Temporary seeding	Fiber Matting (with\without seed)
Hydro seeding	Dust control	Establish permanent vegetation (seeding and sodding)
Soil compaction	Surface roughening	Chemical Stabilization

ASSEMBLY REQUIRED

Stone outlet	Gabions	Hay bale barriers	Stone check dams
Baffles/energy dissipators	Grid pavers	Level spreaders	Silt screen

STRUCTURES

Earth dikes	Retaining walls	Diversions	Terraces
Catchments	Sediment traps	Sediment control basin	Sub-surface drains
Gravel and stone filter berm	Pollution containment wetlands		Temporary swales

* Pollution control measures previously described work best when in combinations and when they are monitored and maintained to ensure their effectiveness.

II. CHEMICAL CONTROL/MANAGEMENT MEASURES

1. Limit application and amount (use only where problem exists), avoid migration of toxic substances (apply properly, and follow product label directions).

2. Ensure the proper storage and disposal of toxic substances.

3. Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters.

III. SOLID WASTE MANAGEMENT MEASURES

1. Temporarily locate a container (on-site) to hold solid waste containers and their remaining contents for permanent proper disposal (landfill or hazardous waste collection site).

2. When needed, dispose of solid waste in accordance with city, county and state regulations.

IV. FUEL STORAGE

1. Apply recommended pollution control measures

   a) Locate storage area away from streams or lakes; avoid burying tanks
   b) Paint the unit bright colors to reduce chances for collision
   c) Develop a spill response plan (to whom and how to report a fuel spill)
   e) Construct a temporary berm or install an artificial containment device
   f) Contact your KDHE District Office for more information.

(Partial information above extracted from U.S. Environmental Protection Agency, Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, 1993.)

POLLUTION CONTROL PLAN REQUIREMENT AND TECHNICAL ASSISTANCE

1. Construction activities disturbing 1 or more acres need to secure a permit from KDHE BUREAU OF WATER- INDUSTRIAL PROGRAMS- (785) 296-5549.

2. Construction activities less than 1 acre do not need a permit, yet must avoid causing water pollution problems. Contact the local County Conservation District to inquire about a local plan which provides local guidance or contact the KDHE Watershed Management Section at (785) 296-4195.

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